

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 10 (Canceled)

Claim 11. (Currently amended) A dental restorative comprising:

a) ~~the a polymer of claim 1~~ having a backbone structure comprising:

1.) a first monomer unit comprising a carboxylic acid-functionalized vinyl monomer; and;

2.) a second monomer unit comprising a vinyl amide; and

3.) a free-radical or visible light curable moiety pendant to the polymer, the free-radical or visible light curable moiety selected from the group consisting of vinyl-substituted unsaturated cyclic imino ethers, 2-isocyanatoethyl methacrylate, and glycidyl methacrylate;

wherein the polymer has a molecular weight in the range of about 10,000 to about 100,000; and

b) an inorganic glass powder, wherein the inorganic glass powder is a calcium fluoroaluminosilicate glass;

wherein the dental restorative is formed when said the polymer is blended with said the inorganic glass powder.

Claim 12 - 17 (Canceled)

Claim 18. (Currently amended) A method for preparing a dental restorative comprising:

a) blending reactants comprising:

- i) a polymer formed from at least one carboxylic acid-containing vinyl monomer and at least one vinyl amide monomer; wherein the polymer further comprises a free-radical or visible light curable moiety pendant to the polymer, the free-radical or visible light curable moiety selected from the group consisting of vinyl-substituted unsaturated cyclic imino ethers, 2-isocyanatoethyl methacrylate, and glycidyl methacrylate; and wherein the polymer has an average molecular weight in the range of about 10,000 to about 100,000; and
 - ii) an inorganic glass powder, wherein the inorganic glass powder is a calcium fluoroaluminosilicate glass;
 - b) applying the blended reactants to a dental area in need of restoration; and
 - c) curing the applied blended reactants.
19. (Currently amended) A kit for use in making dental restoratives comprising:
- a) a polymer comprising carboxylic acid groups and amide groups; wherein the polymer further comprises a free-radical or visible light curable moiety pendant to the polymer, the free-radical or visible light curable moiety selected from the group consisting of vinyl-substituted unsaturated cyclic imino ethers, 2-isocyanatoethyl methacrylate, and glycidyl methacrylate; and wherein the polymer has an average molecular weight in the range of about 10,000 to about 100,000; and
 - b) an inorganic glass powder; wherein the inorganic glass powder is a calcium fluoroaluminosilicate glass;
- wherein the dental restorative is made by blending said the polymer with said the inorganic glass powder.
20. (withdrawn) A kit for use in making dental restoratives comprising:

- a) a carboxylic acid-containing vinyl monomer;
- b) a free-radical polymerizable amide-containing monomer; and
- c) an inorganic glass powder;

wherein a polymer is formed from said carboxylic acid-containing vinyl monomer and said free-radical polymerizable amide and said inorganic glass powder is blended with the polymer to form the dental restorative.

21. (New) The dental restorative of claim 11 wherein the carboxylic acid-functionalized vinyl monomer is selected from the group consisting of acrylic acid, maleic acid, itaconic acid, methacrylic acid, citraconic acid, N-acryloyl substituted amino acids, N-methacryloyl substituted amino acids, and combinations thereof.

22. (New) The dental restorative of claim 21 wherein the polymer comprises at least two of said carboxylic acid-functionalized vinyl monomers.

23. (New) The dental restorative of claim 11 wherein the vinyl amide is selected from the group consisting of acrylamide, methacrylamide, dimethylacrylamide, isopropylacrylamide, N-vinyl-2-pyrrolidone, N-vinylcarbazole, N-vinylsuccinimide, N-vinylcaprolactam, and N-vinylimidazole.

24. (New) The polymer of claim 23 wherein the vinyl amide is N-vinyl-2-pyrrolidone.

25. (New) The polymer of claim 11 wherein the concentration of the vinyl amide ranges from about 5 to about 25 mole percent.

26. (New) The polymer of claim 26 wherein the concentration of the vinyl amide ranges from about 5 to about 10 mole percent.

27. (New) The method of claim 18 wherein the carboxylic acid-containing monomer is selected from the group consisting of acrylic acid, maleic acid, itaconic acid, methacrylic acid, citraconic acid, N-acryloyl substituted amino acids, N-methacryloyl substituted amino acids, and combinations thereof

28. (New) The method of claim 27 wherein the polymer comprises at least two of said carboxylic acid-functionalized vinyl monomers.

29. (New) The method of claim 18 wherein the vinyl amide monomer is selected from the group consisting of acrylamide, methacrylamide, dimethylacrylamide, isopropylacrylamide, N-vinyl-2-pyrrolidone, N-vinylcarbazole, N-vinylsuccinimide, N-vinylcaprolactam, and N-vinylimidazole.

30. (New) The method of claim 18 wherein the concentration of the vinyl amide ranges from about 5 to about 25 mole percent.

31. (New) The polymer of claim 30 wherein the concentration of the vinyl amide ranges from about 5 to about 10 mole percent.

32. (New) The kit of claim 19 wherein the carboxylic acid-containing monomer is selected from the group consisting of acrylic acid, maleic acid, itaconic acid, methacrylic acid, citraconic acid, N-acryloyl substituted amino acids, N-methacryloyl substituted amino acids, and combinations thereof

33. (New) The kit of claim 32 wherein the polymer comprises at least two of said carboxylic acid-functionalized vinyl monomers.

34. (New) The kit of claim 19 wherein the vinyl amide monomer is selected from the group consisting of acrylamide, methacrylamide, dimethylacrylamide, isopropylacrylamide, N-

35. (New) The kit of claim 19 wherein the concentration of the vinyl amide ranges from about 5 to about 25 mole percent.

36. (New) The polymer of claim 35 wherein the concentration of the vinyl amide ranges from about 5 to about 10 mole percent.